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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/135,804	08/18/98	MAROCCO G	12388.03

EXAMINER	
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DATE MAILED: 04/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/135,804	Applicant(s) Marocco
	Examiner Hien Tran	Group Art Unit 1764

☒ Responsive to communication(s) filed on *Feb 15, 2000* .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-30* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-30* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on *Feb 15, 2000* is ☒approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 21, line 22 --or sound attenuating plenum-- should be inserted before "44" (note page 19, line 26 and page 21, lines 18-19, 22).

Note that applicant should use the same terminology throughout the specification and claims to avoid confusion.

Appropriate correction is required.

2. The amendment filed 2/15/00 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: On page 11, line 14 the newly added sentences after "harmless products" is nowhere disclosed in the original specification. On page 17, line 3 the insertion of "(e.g., 0.010" maximum)" is nowhere disclosed in the original specification.

Applicant is required to cancel the new matter in the reply to this Office action.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, lines 8, 17-18 and 29 the newly added limitations are nowhere disclosed in the original specification. See claims 11, 21 likewise.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 8, 17-18 and 29 it is unclear as to the newly added limitations are disclosed in the original specification. See claims 11, 21 likewise.

In claim 7, it is unclear as to what is intended by "width". See claims 17, 27 likewise.

In claim 11, line 32 it is unclear as to what is intended by "axially parallel to one another" and where such is shown in the drawings.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 4, 6, 9, 21, 24-26, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Wagner et al (5,355,973).

Wagner et al disclose an apparatus for modifying an exhaust stream comprising:

a canister 11 including an inlet end 17, a forward portion, a rearward portion and an outlet end 18, a forward inner diameter and a rearward inner diameter;

at least one catalytic converter element 50 installed within the forward portion of the canister 11, said catalytic converter element 50 having an outer diameter and including a substrate 51 having a plurality of passages defined by plurality of walls;

a resonator element 65 installed within the rearward portion of the canister 11, said resonator element 65 having a hollow core, a forward end, a rearward end, an outer diameter, and a plurality if sound attenuating perforations 84 formed radially therethrough;

said outer diameter of the resonator element 65 being smaller than the rearward inner diameter of the canister 11 and defining a sound attenuating plenum 85 therebetween; and

said inlet end 17 of the canister 11, said plurality of passages of the catalytic converter element 50, said hollow core of said resonator element 65 and said outlet end 18 of said canister 11 all being axially aligned with one another.

With respect to the newly added limitation, note that the catalytic converter element 50 of Wagner et al is in form of a monolithic converter and its passages are parallel to the longitudinal axis of the canister.

With respect to claim 2, the canister 11 of Wagner et al is a tubular shell.

With respect to claims 4, and 24, refer to the plates 66 and 77 in Wagner et al.

With respect to claims 6, and 26, refer to the catalytic converter element 50 (Fig. 3) of Wagner et al.

With respect to claims 9, and 29, Wagner et al disclose that the catalytic converter element 50 is made of ceramic material (col. 9, lines 5-15).

With respect to claim 21, Wagner et al disclose that the rearward end of the resonator element 65 extends outwardly beyond said outlet end 18 of the canister 11.

With respect to claim 25, the plate 66 of Wagner et al does not have passages therethrough.

Instant claims 1-2, 4, 6, 9, 21, 24-26, 29 structurally read on the apparatus of Wagner et al.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

12. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

13. Claims 3, 22-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over as applied to claims above, and further in view of Munro (4,541,240).

With respect to claims 3 and 23, the modified apparatus of is substantially the same as that instantly claimed, but is silent as to the specific material for the canister and the resonator element.

However, Munro discloses the conventionality of providing a canister and a resonator element made of steel. Munro also discloses that the sound absorbent material is disposed in the sound attenuating plenum between the canister and the resonator element.

It would have been obvious to one having ordinary skill in the art to select an appropriate material for the canister and the resonator element, such as steel as taught by Munro in the apparatus of Wagner et al on the basis of its suitability for the intended use as a matter of obvious design choice and since use of such is conventional in the art and no cause for patentability here.

With respect to claim 22, it would have been obvious to one having ordinary skill in the art to provide sound absorbent material in the sound attenuating plenum between the canister and the resonator element as taught by Munro in the apparatus of Wagner et al to absorb sound.

14. Claims 5, 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of Plemons, Jr. (5,183,976).

Plemons, Jr. discloses provision of a forward plate 22 with a solid periphery devoid of passages and a rearward plate 24 with a plurality of passages 34.

It would have been obvious to one having ordinary skill in the art to construct the forward and rearward plates as taught by Plemons, Jr. in the apparatus of Wagner et al so as to allow the exhaust gas exiting the resonator plenum.

15. Claims 7-8, 27-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of either Berg et al (4,364,761) or Lachman et al (3,885,977).

The apparatus of Wagner et al is substantially the same as that of the instant claims, but is silent as to the specific width of the passages of the catalytic converter element.

Berg et al and Lachman et al disclose provision of a ceramic substrate having passages wherein the width of each passage is greater than 0.040 inch (see col. 3, lines 4-6 in Berg et al and col. 16, line 7 in Lachman et al).

It would have been obvious to one having ordinary skill in the art to select the specific width as taught by Berg et al or Lachman et al in the apparatus of Wagner et al for reducing restriction to the exhaust gas flow and since such is conventional in the art and no cause for patentability here. .

With respect to claims 8 and 28, the passages of the substrate in Berg et al or Lachman et al appear to have a large width which falls within the instant range and the walls of the substrate appear to be thin.

16. Claims 10, 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of Ignoffo (4,032,310) or Harris (5,016,438).

Ignoffo and Harris show the conventionality of providing more than one catalytic converter elements.

It would have been obvious to one having ordinary skill in the art to provide more than one catalytic converter element in the apparatus of Wagner et al as taught by Ignoffo and Harris for further purifying exhaust gas.

17. Claims 11-12, 14, 16, 19-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of JP 64-12017 and Harris (5,016,438).

The apparatus of Wagner et al is substantially the same as that of the instant claims, but fails to disclose whether the inlet and outlet ends may be provided in pair and whether more than one resonator element may be provided.

However, JP 64-12017 discloses provision of inlet and outlet ends provided in pair.

Harris discloses the conventionality of providing more than one resonator elements 80.

It would have been obvious to one having ordinary skill in the art to alternatively provide more one inlet and outlet ends, as taught by JP 64-12017 and provide more than one resonator element as taught by Harris in the apparatus of Wagner et al on the basis of its suitability for the intended use as a matter of obvious design choice and since use of such is conventional in the art and no cause for patentability here and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With respect to claim 12, the canister 11 of Wagner et al is a tubular shell.

With respect to claim 14, refer to the plates 66 and 77 in Wagner et al.

With respect to claim 16, refer to the catalytic converter element 50 (Fig. 3) of Wagner et al.

With respect to claim 19, Wagner et al disclose that the catalytic converter element 50 is made of ceramic material (col. 9, lines 5-15).

With respect to claim 20, the same comments regarding more than one catalytic converter elements with respect to Harris apply.

18. Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of JP 64-12017 and Harris (5,016,438) as applied to claims 11-12, 14, 16, 19-20 above, and further in view of Munro (4,541,240).

The same comments with respect to Munro apply.

19. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of JP 64-12017 and Harris (5,016,438) as applied to claims 11-12, 14, 16, 19-20 above, and further in view of Plemons, Jr. (5,183,976).

The same comments with respect to Plemons, Jr. apply.

20. Claims 17-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wagner et al (5,355,973) in view of JP 64-12017 and Harris (5,016,438) as applied to claims 11-12, 14, 16, 19-20 above and further in view of either Berg et al (4,364,761) or Lachman et al (3,885,977).

The same comments with respect to Berg et al and Lachman et al apply.

Response to Arguments

21. Applicant's arguments filed 2/15/00 have been fully considered but they are not persuasive.

Applicants argue that the device of Wagner et al is directed to a catalytic and muffler for use in diesel internal combustion engine and the reference of Wagner et al is silent as to how to use the device with gasoline internal combustion engine while the instant invention is directed to a catalytic converter and sound attenuating resonator combination that is used in the exhaust system of an internal combustion engine with or without a muffler. Such contention is not persuasive as a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Applicants argue that the combination of the references would destroy the functionality and operability of the muffler disclosed in Wagner et al. Such contention is not convincing persuasive as it is merely applicants' opinion without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicants argue that the device of Wagner et al forms dead spaces which do not allow the gases exit the device until the engine has been shut down while the instant invention does not set dead spaces within the casing. Such contention is not persuasive as the language of the instant claims does not commensurate in scope with such argument nor preclude provision of any dead spaces.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The motivation for the combination of the references has been provided as set forth in the above rejections.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (703) 308-4253. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode, can be reached on (703) 308-4311. The fax phone number for this Group is (703) 305-3599 (for Official papers after Final), (703) 305-5408 (for other Official papers) and (703) 305-6078 (for Unofficial papers).

When filing a FAX in Group 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

HT
April 17, 2000

Hien Tran

HIEN TRAN
PRIMARY EXAMINER
GROUP 1700